

(FILE 'HOME' ENTERED AT 15:09:51 ON 06 FEB 2002)

FILE 'AGRICOLA' ENTERED AT 15:11:55 ON 06 FEB 2002

L1	1106 S LIQUID MANURE
L2	0 S L1 AND ISOLATE AND DNA
L3	2 S L1 AND FISH
L4	2 DUP REMOVE L3 (0 DUPLICATES REMOVED)
L5	19 S L1 AND POULTRY
L6	19 DUP REMOVE L5 (0 DUPLICATES REMOVED)
L7	91 S L1 AND NITROGEN?
L8	91 DUP REMOVE L7 (0 DUPLICATES REMOVED)
L9	91 S L8
L10	2 S L8 AND CELL?
L11	2 DUP REMOVE L10 (0 DUPLICATES REMOVED)
L12	7 S ISOLATE AND DNA AND (MANURE OR FERTILIZER)
L13	7 DUP REMOVE L12 (0 DUPLICATES REMOVED)

L11 ANSWER 1 OF 2 AGRICOLA

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TITLE: Composition and microbial degradability in the soil of

farmyard manure from ecologically-managed farms.

AUTHOR(S): Dewes, T.; Hunsche, E.

CORPORATE SOURCE: Christian-Albrechts-University, Kiel, Germany.

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AB Compared with usual reference values, liquid cattle manure from ecologically-managed farms (n = 13) had low average nutrient contents. In the case of solid manure obtained from cattle (n = 96) and from pigs (n = 18), the proportion of NH<sub>4</sub><sup>+</sup> in the N(total) (8.4% and 10.3% respectively),

the CaO content (0.26% and 0.27% respectively) and, in the case of pig manure, the P<sub>2</sub>O<sub>5</sub> content (0.57%), were all relatively low. On the other hand, the K<sub>2</sub>O content of cattle manure (0.8%) was higher than that quoted in reference values. The manures from deep-litter stables had an above average content of K<sub>2</sub>O (1.03%). The content of N(total) in the sequence deep litter stable > stanchion stable > sloping floor stable. The more frequently the manure heaps were relocated or rotated, and the older they became, the more the content of organic matter and in particular the percentage of K<sub>2</sub>O in the mineral fraction declined. The net mineralization

of manure-C in the soil was between 6.9 and 53.1% after aerobic incubation

for 10 weeks, and that of N between -5.4 and 19.5%. In the case of C, 75.2%, and in the case of N, 65.9% of the mineralization could be explained by the amounts of cellulose, hemicellulose, lignin, free amino acids, protein and heterocyclic N compounds contained in the manures, as well as by their C:N ratio. The organic matter of manures from

sloping floor stables was more readily and rapidly mineralized than the organic matter of manures from stanchion or deep-litter stables.